AMENDMENTS TO THE CLAIMS

1. (currently amended) A silicon-containing resist composition, said composition comprising

   (a) an acid-sensitive imaging polymer,

   (b) a radiation-sensitive acid generator, and

   (c) a non-polymeric silicon additive which is free of acid labile moieties and/or which contains lactone.

2. (original) The resist composition of claim 1 wherein said imaging polymer contains a monomer selected from the group consisting of a cyclic olefin, an acrylate and a methacrylate.

3. (original) The resist composition of claim 1 wherein said imaging polymer contains fluorine moieties.

4. (original) The resist composition of claim 1 wherein said composition contains at least about 5 wt.% silicon based on weight of said imaging polymer.

5. (original) The resist composition of claim 1 wherein said non-polymeric silicon additive contains at least about 10 carbon atoms.

6. (original) The resist composition of claim 1 wherein said imaging polymer contains silicon.

7. (canceled)

8. (original) The resist composition of claim 1 wherein said non-polymeric silicon additive contains at least two silicon-containing moieties.

9. (original) The resist composition of claim 1 wherein said non-polymeric silicon additive contains at least one ring structure.

10. (original) The resist composition of claim 1 wherein said non-polymeric silicon additive has a weight average molecular weight of less than 3000 and a sublimation temperature or boiling point of at least 150°C.

11. (currently amended) A method of forming a patterned material structure on a substrate, said material being selected from the group consisting of semiconductors, ceramics and metals, said method comprising:

(A) providing a substrate with a layer of said material,

(B) forming a planarizing layer over said material layer,

(C) applying a resist composition over said planarizing layer to form a resist layer, said resist composition comprising:
(a) an acid-sensitive imaging polymer,
(b) a radiation-sensitive acid generator, and
(c) a non-polymeric silicon additive which is free of acid labile moieties and/or which contains lactone.

(D) patternwise exposing said substrate to radiation whereby acid is generated by said radiation-sensitive acid generator in exposed regions of said resist layer by said radiation,

(E) contacting said substrate with an aqueous alkaline developer solution, whereby said exposed regions of said resist layer are selectively dissolved by said developer solution to reveal a

patterned resist structure,

(F) transferring resist structure pattern to said planarizing layer, by etching into said planarizing layer through spaces in said resist structure pattern, and

(G) transferring said structure pattern to said material layer, by etching into said material layer through spaces in said planarizing layer pattern.

12. (original) The method of claim 11 wherein said etching of step (G) comprises reactive ion etching.

13. (original) The method of claim 11 wherein said radiation has a wavelength of about 193 nm.

14. (original) The method of claim 11 wherein said substrate is baked between steps (D) and (E).

15. (original) The method of claim 11 wherein said imaging polymer contains a monomer selected from the group consisting of a cyclic olefin, an acrylate and a methacrylate.

16. (original) The method of claim 11 wherein said imaging polymer contains fluorine moieties.

17. (original) The method of claim 11 wherein said composition contains at least about 5 wt.% silicon based on weight of said imaging polymer.

18. (original) The method of claim 11 wherein said non-polymeric silicon additive contains at least about 10 carbon atoms.

19. (original) The method of claim 18 wherein said imaging polymer contains silicon.

20. (canceled).

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